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## New Claims

1. Electromagnet for actuating a valve, the  
electromagnet (28) comprising an armature (58) which  
5 can be axially displaced in an armature space (57, 77)  
and of which the axial motion displaces a tappet (29)  
to the valve and a reflux channel (69, 71, 73)  
connected to the armature space (57, 77) being  
provided, via which the armature space (57, 77) is  
10 connected to a tank volume (25) for removing a  
pressure medium leakage flow that is flowing out of  
the valve into the armature space (57, 77),  
**characterised in that**  
at least one first channel portion (69) of the reflux  
15 channel (96, 71, 73) is arranged in a pole tube (50)  
and in that  
a second channel portion (71) of the reflux channel is  
provided in a housing cover (53) and which discharges  
from the housing cover (53) on a surface provided for  
20 abutment against a valve housing (7).  
  
2. Electromagnet according to claim 1,  
**characterised in that**  
the reflux channel (69, 71, 73) discharges in a  
25 radially expanded portion (56) of a through  
passage (51) connected to the armature space (57, 77).  
  
3. Electromagnet according to claim 1,  
**characterised in that**  
30 the reflux channel (69, 71, 73) discharges directly  
into the armature space (57, 77).

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4. Electromagnet according to any one of claims 1 to 3,  
**characterised in that**  
a rear armature space (77) constructed on the side of  
the armature (58) facing away from the tappet (29) is  
5 connected to the armature space (57) by means of at  
least one armature channel (59).
  
5. Electromagnet according to any one of claims 1 to 4,  
**characterised in that**  
10 the tank volume connected to the armature space (57,  
77) via the reflux channel (69, 71, 73) is a tank  
volume (25) constructed in the valve.